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## Indications

1. Triangular fibrocartilage complex (TFCC) tear that fails to respond to conservative treatment.
2. Open repair of peripheral tear is recommended when there is distal radioulnar joint (DRUJ) instability and TFC tear from ulnar fovea.

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## Essential Steps

### Preoperative Markings

1. Identify the interval between the fifth and sixth dorsal compartments.
2. Mark a 5 cm longitudinal line over the distal ulna along this interval.

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## Intraoperative Details

### Peripheral Tear

1. Placed in supine position with upper extremity on hand table. Tourniquet on upper arm.
2. General anesthesia or Monitor Anesthesia Care.
3. Diagnostic arthroscopy performed to diagnose tear.
4. Incision made over distal ulna over extensor digiti minimi (EDM).
5. L-shaped capsulotomy performed.
6. TFCC repaired through bone tunnels using 3-0 PDS suture.

### Peripheral Tear with Ulnar Styloid

#### Fracture

1. Placed in supine position with upper extremity on hand table. Tourniquet on upper arm.
2. General anesthesia or Monitor Anesthesia Care.
3. Diagnostic arthroscopy performed to diagnose tear.
4. Incision made over distal ulna between the EDM and the extensor carpi ulnaris (ECU).
5. Styloid repaired with choice of fixation based on fragment size.

## Postoperative Care

1. Sugar tong splint applied at the completion of surgery with forearm in neutral position.

2. After 2 weeks, sutures are removed and patient placed into long-arm cast for another 2 weeks then 2 additional weeks in a short arm cast.
3. Cast is removed at 6 weeks, patient is placed in protective forearm splint, and gentle range of motions exercises are started with restriction of radial–ulnar deviation for 3 months after surgery. Radial–ulnar deviation will be restored as the patient works on pronation–supination and wrist flexion–extension. Radial–ulnar deviation will place stress on the TFCC repair and may result in rupture of the repair.

### Possible Complications

1. Failure to diagnose and treat concomitant injuries.
2. Injury to dorsal sensory nerves.
3. Loss of wrist motion.
4. Failure of repair/nonunion of ulnar styloid.

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### Operative Dictation

Diagnosis: TFCC ulnar peripheral tear (associated ulnar styloid fracture).

Procedure: open TFCC repair.

### Indication

This is a \_\_\_\_\_ with peripheral TFCC tear that has failed conservative treatment. MRI was obtained documenting \_\_\_\_\_. Patient understands the benefits, risks, and alternatives associated with the procedure, and wishes to proceed.

### Description of the Procedure

After the informed consent was verified, the patient was taken to the operating room and placed in supine position. Time out among operating room staff was taken. Monitor Anesthesia Care as instituted. Preoperative antibiotics were given. The limb was prepped and draped in the standard sterile fashion. The limb was exsanguinated and tourniquet was inflated.

The 5 cm skin incision was made between the fifth and sixth extensor compartments over the dorsal ulnar head. The subcutaneous tissue was bluntly dissected taking care to carefully mobilize the dorsal ulnar sensory nerve branches. The extensor digiti minimi (EDM) sheath was incised and the EDM was mobilized. An “L”-shaped capsulotomy was made. The longitudinal limb began at the ulnar neck and extended to the edge of the sigmoid notch. The origin of the dorsal radioulnar ligament from the sigmoid notch was preserved. The transverse limb was then made along the proximal edge of the dorsal radioulnar ligament and extended to the radial margin of the extensor carpi ulnaris sheath. The capsule was elevated to expose the ulnar head and neck. The triangular fibrocartilage complex (TFCC) tear was visualized. The TFCC distal surface was exposed by creating a transverse ulnocarpal capsulotomy along the distal edge of the dorsal radioulnar ligament. The insertion site of the TFCC into the fovea was debrided to bleeding bone. 0.045-in. Kirschner wire was used to create 3 bone tunnels in the distal ulna extending from the dorsal aspect of the ulnar neck to the fovea. Two horizontal mattress sutures using 3-0 PDS were passed from distal to proximal through the ulnar aspect of the TFCC periphery. These sutures were then passed through the three bone tunnels from inside out and tied over the ulnar neck with the joint reduced and the forearm in neutral rotation. The dorsal distal radioulnar joint (DRUJ) capsule and retinaculum were closed together as a single layer with a 3-0 vicryl sutures. The skin was closed with a 4-0 nylon suture in an interrupted fashion. The wound was dressed in the usual manner. A sugar tong splint was applied with the forearm in neutral position [1, 2].

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### References

1. Hermansdorfer JD, Kleinman WB. Management of chronic peripheral tears of the triangular fibrocartilage complex. *J Hand Surg Am.* 1991;16(2): 340–6. Available from: [http://dx.doi.org/10.1016/S0363-5023\(10\)80123-6](http://dx.doi.org/10.1016/S0363-5023(10)80123-6).
2. Cooney WP, Linscheid RL, Dobyns JH. Triangular fibrocartilage tears. *J Hand Surg Am.* 1994;19(1): 143–54.